

FORM-PTO-1390
(Rev. 12-29-99)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

**TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371**

027566-036

U S APPLICATION NO (If known, see 37 C.F.R. 1.5)

UNASSIGNED

09/890557

INTERNATIONAL APPLICATION NO.
PCT/FI00/00074INTERNATIONAL FILING DATE
2 February 2000PRIORITY DATE CLAIMED
2 February 1999

TITLE OF INVENTION

ADDRESSING IN THE INTERNET

APPLICANT(S) FOR DO/EO/US

Keijo LAIHO

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and the PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☒ is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☒ has been transmitted by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US)
6. ☐ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ have been transmitted by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☒ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern other document(s) or information included:

11. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A **FIRST** preliminary amendment.
☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information:

International Preliminary Examination Report, PCT Demand, Unexecuted Declaration

U.S. APPLICATION NO. (If known, see 37 CFR 1.501)
UNASSIGNED 09/890557INTERNATIONAL APPLICATION NO.
PCT/FI00/00074ATTORNEY'S DOCKET NUMBER
027566-03617. ☒ The following fees are submitted:

CALCULATIONS

PTO USE ONLY

Basic National Fee (37 CFR 1.492(a)(1)-(5)):Neither international preliminary examination fee (37 CFR 1.482)
nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO
and International Search Report not prepared by the EPO or JPO \$1,000.00 (960)International preliminary examination fee (37 CFR 1.482) not paid to
USPTO but International Search Report prepared by the EPO or JPO \$860.00 (970)International preliminary examination fee (37 CFR 1.482) not paid to USPTO
but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$710.00 (958)International preliminary examination fee paid to USPTO (37 CFR 1.482)
but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$690.00 (956)International preliminary examination fee paid to USPTO (37 CFR 1.482)
and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00 (962)**ENTER APPROPRIATE BASIC FEE AMOUNT =**

\$ 860.00

Surcharge of \$130.00 (154) for furnishing the oath or declaration later than
months from the earliest claimed priority date (37 CFR 1.492(e)).20 ☐ 30 ☐

\$ -0-

Claims	Number Filed	Number Extra	Rate
Total Claims	10 -20 =	-0-	X\$18.00 (966)

\$ -0-

Independent Claims	3 -3 =	-0-	X\$80.00 (964)
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\$ -0-

Multiple dependent claim(s) (if applicable) + \$270.00 (968)

\$ -0-

TOTAL OF ABOVE CALCULATIONS =

\$

Reduction for 1/2 for filing by small entity, if applicable (see below).

\$ -0-

SUBTOTAL =

\$ 860.00

Processing fee of \$130.00 (156) for furnishing the English translation later than
months from the earliest claimed priority date (37 CFR 1.492(f)).20 ☐ 30 ☐

\$ -0-

+

TOTAL NATIONAL FEE =

\$ 860.00

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by
an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 (581) per property +

\$ -0-

TOTAL FEES ENCLOSED =

\$ 860.00

Amount to be:
refunded \$

charged \$

a. ☐ Small entity status is hereby claimed.b. ☒ A check in the amount of \$ 860.00 to cover the above fees is enclosed.c. ☐ Please charge my Deposit Account No. 02-4800 in the amount of \$_____ to cover the above fees. A duplicate copy of this sheet is enclosed.d. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 02-4800. A duplicate copy of this sheet is enclosed.**NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.**

SEND ALL CORRESPONDENCE TO:

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SIGNATURE

Kenneth B. Leffler

NAME

36,075

REGISTRATION NUMBER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)	
)	
Keijo LAIHO)	Group Art Unit: UNASSIGNED
)	
Application No.: UNASSIGNED)	Examiner: UNASSIGNED
)	
Filed: August 2, 2001)	
)	
For: ADDRESSING IN THE INTERNET)	

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination, please amend the above-identified application as follows:

IN THE CLAIMS:

Please replace claims 3-6 and 8 as follows:

3. (Amended) A method according to claim 1, wherein the error message transmitted from the browser to the first network server includes said second resource locator.

4. (Amended) A method according to claim 1, wherein the error message returned from the second network server to the browser, and transmitted from the browser to the first network server, contains a corrected resource locator provided by the second network server.

5. (Amended) A method according to claim 1, wherein the network to which the servers and the client computer are connected is the Internet, and said resource locators are Universal Resource Locators (URLs).

6. (Amended) A method according to claim 1, wherein the file containing the incorrect hyperlink is an HTML file.

8. (Amended) A method according to claim 1, wherein the first network server, upon notification of an incorrect hyperlink from a client's browser, automatically transmits a resource locator download request to the incorrect resource locator.

REMARKS

The above changes to the claims have been made to delete multiple dependency of the claims, to round out the scope of patent protection being sought, and generally to place the claims in better condition for examination on the merits.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: 

Kenneth B. Leffler

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Date: August 2, 2001

Attachment to Amendment dated August 2, 2001

Marked-up claims 3-6 and 8

3. (Amended) A method according to claim 1 [or 2], wherein the error message transmitted from the browser to the first network server includes said second resource locator.

4. (Amended) A method according to claim 1 [any one of the preceding claims], wherein the error message returned from the second network server to the browser, and transmitted from the browser to the first network server, contains a corrected resource locator provided by the second network server.

5. (Amended) A method according to claim 1 [any one of the preceding claims], wherein the network to which the servers and the client computer are connected is the Internet, and said resource locators are Universal Resource Locators (URLs).

6. (Amended) A method according to claim 1 [any one of the preceding claims], wherein the file containing the incorrect hyperlink is an HTML file.

8. (Amended) A method according to claim 1 [any one of the preceding claims], wherein the first network server, upon notification of an incorrect hyperlink from a client's browser, automatically transmits a resource locator download request to the incorrect resource locator.

Addressing in the Internet

Field of the Invention

- 5 The present invention relates to addressing in the Internet and more particularly to hyperlinks such as are used in the World Wide Web.

Background to the Invention

10

Growth in the use of the Internet, and in particular that part of the Internet known as the World Wide Web (WWW), has been extremely rapid in recent years. Much of the success of the WWW is due to the simple and

15 efficient way in which an enormous number of separate documents (or files) may be linked together, allowing a user to browse through related documents merely at the click of a mouse button.

- 20 WWW documents (or pages) are written in a language known as Hyper Text Mark-up Language (HTML) which lies somewhere between conventional computer programming languages and plain English text. A link to a page on a WWW server may be included in some other WWW page by
- 25 including the Universal Resource Locator (URL) of the "referenced" page in the HTML file corresponding to the "referring" page. For example, if one wished to include a link to the WWW page of the European Patent Office in some other WWW page, then the following line could be
- 30 added to the corresponding HTML file:

```
<A HREF="http://www.european-patent-office.org">  
European Patent Office</A>
```

This would result in the WWW page displaying "European Patent Office" as a clickable link.

35

A common source of annoyance for users of the WWW is the return of a message, after a link has been clicked, indicating that the WWW page at the requested URL cannot be located. This situation often results from WWW pages being deleted from a WWW server or alternatively being relocated to a new URL.

Redirection tools are available for redirecting an original request to an out of date URL, to a new URL.

Typically, this involves running an application at a WWW server where the requested page is located, and which intercepts requests to the URL and replaces them with a request to the new URL. Whilst this results in the correct page being delivered to the Web browser from which the request originated, it does not address the fundamental problem, i.e. the incorrect URL incorporated into the clicked hyperlink.

Summary of the Present Invention

It is an object of the present invention to overcome or at least mitigate the disadvantages outlined in the preceding paragraph. In particular, it is an object of the present invention to correct or facilitate the correction of an incorrect hyperlink in a WWW page.

According to a first aspect of the present invention there is provided a method of facilitating the correction of an incorrect hyperlink contained in a file stored on a first network server at an address identified by a first resource locator and which hyperlink points to a second resource locator at a second network server, the method comprising:

copying said file from said first network server to a browser of a client computer via the network;

selecting said hyperlink at the browser so as to transmit a resource locator retrieval request from the browser to said second network server;

receiving said request at the second network server
5 and responding by returning to the browser a resource locator error message; and

automatically transmitting the resource locator error message from the browser to said first network server.

10

Embodiments of the present invention provide for the automatic transmission of the resource locator error message to the server at which the file containing the incorrect resource locator is maintained. This enables
15 corrective action to be taken at that server, e.g. the automatic or manual correction of the resource locator.

20

Preferably, the error message transmitted from the browser to the first network server includes said first resource locator.

25

Preferably, the error message transmitted from the browser to the first network server includes said second resource locator.

30

Preferably, the error message returned from the second network server to the browser, and transmitted from the browser to the first network server, contains a corrected resource locator provided by the second
network server.

35

Preferably, the network to which the servers and the client computer are connected is the Internet, and said resource locators are Universal Resource Locators (URLs). More preferably, said file containing the incorrect hyperlink is an HTML file and forms part of the information network known as the World Wide Web. In

this case, said browser is a Web browser.
Alternatively, the file may have some other format
and/or the network may function according to some other
non-Internet protocol.

5

The first network server may, upon notification of an
incorrect URL/hyperlink from a client's browser,
automatically transmit a URL download request to the
incorrect URL. In response to this request, the second
10 network server will again return a corrected URL to the
first network server. In this way, confirmation of the
original browser notification may be achieved.

According to a second aspect of the present invention
15 there is provided apparatus for facilitating the
correction of an incorrect hyperlink contained in an
electronic file, the apparatus comprising;

a first network server having a memory for storing
said file at an address identified by a first resource
20 locator, said hyperlink pointing to a second resource
locator at a second network server;

a client computer arranged to copy said file from
said first network server to a browser of the client
computer, via the network, and to transmit a resource
25 locator retrieval request from the browser to said
second network server upon selection of said hyperlink;
and

a second network server arranged to receive said
request and to respond by returning to said browser an
30 error message,

wherein the client computer is further arranged to
transmit the error message, from the browser, to said
first network server.

35 According to a third aspect of the present invention
there is provided a computer memory encoded with
executable instructions representing a computer program

for causing a computer system connected to a data network to:

transmit a resource locator retrieval request to a first network server over a data network;

5 download an electronic file from the first network server and which is stored at an address identified by said resource locator, the file containing a hyperlink pointing to a resource locator at a second network server;

10 in response to selection of the hyperlink, transmit a resource locator retrieval request to said second network server;

in the event that the second mentioned resource locator is incorrect, to receive from the second network server an error message; and

15 transmit the error message to said first network server.

Brief Description of the Drawings

20 For a better understanding of the present invention and in order to show how the same may be carried into effect reference will now be made by way of example to the accompanying drawings, in which:

25 Figure 1 illustrates schematically a portion of the Internet; and

Figure 2 is a flow diagram illustrating a method of operation of the Internet portion of Figure 1.

30 Detailed Description of Certain Embodiments

There is illustrated in Figure 1 a portion of the Internet which includes a "public" network 1 comprising a large number of interconnected routers (not shown in the Figure). A client computer 2, e.g. that belonging to a home user, is connected to the public network 1 via

a PSTN telephone network 3 and an Internet Access Server 4. Also connected to the public network 1 via respective Internet Access Servers 5,6 are a pair of network servers 7,8. It will be appreciated that the client computer 2 and the networks servers 7,8 are in practice supplemented by a great number of similar computers. Furthermore, the precise details of the connectivity of these computers to the public network 1 may vary greatly, e.g. in many cases computers will be connected to the public network 1 via private intranets.

In order to access the information network known as the World Wide Web (WWW) which is available over the Internet, the client computer 2 is provided with a so-called web browser. This is a software application running on the computer 2; current examples include Netscape Navigator™ and Microsoft Explorer™. The WWW relies upon a document creation language known as Hyper Text Mark-up Language (HTML), and web browsers are designed to interpret documents written in this language for display at the client computer 2. HTML provides for the incorporation of hyperlinks into WWW documents as has already been described above.

Consider now a situation where the web browser at the client computer 2 sends a specific URL resource retrieval request to the public network 1 via the PSTN 3 and the associated IAS 4, where the URL is an address located at a first of the network servers 7 (in this context, the network servers 7,8 may be referred to as "web servers"). This request is routed to the first server 7, which recognises the request and responds by returning the page (referred to below as the "source" page) located at the URL to the public network 1 which in turn routes the page to the client computer 2 from which the request originated. The received web page is

then displayed at the client computer 2 by the web browser.

Normally, the web page returned to the client computer's browser will contain one or more hyperlinks. Now assume that one of these hyperlinks contains an out of date URL, which URL points to a location on the second network server 8 which is no longer valid, i.e. because the web page previously maintained at that location has been moved to a new location (also at the second server 8). In the event that the user selects the incorrect hyperlink by clicking on the link, the browser transmits a URL resource retrieval request to the second network server 8 over the Internet. The second server 8 receives the request, and checks to see whether or not the associated URL is valid. If the answer is yes, the server retrieves the requested page, and returns it to the web browser at the client computer 2. However, if the requested URL does not exist, then the server 8 proceeds as follows.

Firstly, the server 8 seeks to determine if the requested page has been moved to a new URL. For this purpose, the server may maintain a look-up table mapping old URLs to new URLs. If a new URL is identified, then the server 8 returns the page located at the new URL to the client computer's web browser, where the page is displayed. Secondly, the server 8 returns a "correction" message to the client computer's web browser notifying the browser that the requested URL is out of date, and providing the new URL. In the event that the second network server 8 is unable to identify a new URL for an out of date URL, a message may nonetheless be sent to the client computer's browser indicating that the requested URL is unavailable.

The browser responds to the correction message by automatically relaying the message to the first network server 7 and from which the web page having the incorrect URL originated. The browser appends to the
5 correction message an identification of the incorrect URL. This process may occur without the involvement of the user of the web browser.

The first network server 7 responds to receipt of the
10 correction message by automatically transmitting a resource retrieval request to the incorrect URL. The second server 8 will respond to receipt of this request as has already been described above, i.e. by returning the page located at the new URL, together with a
15 correction message containing the new URL (if indeed a new URL is available). The first network server 7 takes this new message as confirmation of the correction message returned from the client computer 1, and thereafter stores the message in a data file associated
20 with the source page.

Subsequent resource retrieval requests made to the first network server 7 for the source page, result in the downloading of the data file together with the source
25 page itself. The client computer's browser uses the data file to automatically redirect resource retrieval requests to the corrected URL (or terminate the request if no corrected URL is available). The data file also provides the system administrator responsible for the
30 first network server 7 with information for correcting or updating the source page's HTML file. For this purpose, the administrator may be automatically notified (e.g. by e-mail) of changes to a data file.

35 Figure 2 is a flow diagram illustrating further the method of operation of the embodiment described above.

It will be appreciated by the person of skill in the art that various modifications may be made to the above described embodiment without departing from the scope of the present invention. For example, in cases where the source page is stored at a server which provides an Internet search engine capability, a correction message may be used by the server to delete out of date URLs from the search directory. It will also be appreciated that, in cases where a web page has been relocated to a new server, a corrected URL sent by a server to a browser may point to a location on that new server.

Claims

1. A method of facilitating the correction of an incorrect hyperlink contained in a file stored on a first network server at an address identified by a first resource locator and which hyperlink points to a second resource locator at a second network server, the method comprising:

copying said file from said first network server to a browser of a client computer via the network;

selecting said hyperlink at the browser so as to transmit a resource locator retrieval request from the browser to said second network server;

receiving said request at the second network server and responding by returning to the browser a resource locator error message; and

automatically transmitting the resource locator error message from the browser to said first network server.

2. A method according to claim 1, wherein the error message transmitted from the browser to the first network server includes said first resource locator.

3. A method according to claim 1 or 2, wherein the error message transmitted from the browser to the first network server includes said second resource locator.

4. A method according to any one of the preceding claims, wherein the error message returned from the second network server to the browser, and transmitted from the browser to the first network server, contains a corrected resource locator provided by the second network server.

5. A method according to any one of the preceding claims, wherein the network to which the servers and the client computer are connected is the Internet, and said resource locators are Universal Resource Locators (URLs).

6. A method according to claim any one of the preceding claims, wherein the file containing the incorrect hyperlink is an HTML file.

7. A method according to claim 6, wherein said browser is a Web browser.

8. A method according to any one of the preceding claims, wherein the first network server, upon notification of an incorrect hyperlink from a client's browser, automatically transmits a resource locator download request to the incorrect resource locator.

9. Apparatus for facilitating the correction of an incorrect hyperlink contained in an electronic file, the apparatus comprising;

a first network server having a memory for storing said file at an address identified by a first resource locator, said hyperlink pointing to a second resource locator at a second network server;

a client computer arranged to copy said file from said first network server to a browser of the client computer, via the network, and to transmit a resource locator retrieval request from the browser to said second network server upon selection of said hyperlink; and

a second network server arranged to receive said request and to respond by returning to said browser an error message,

wherein the client computer is further arranged to transmit the error message, from the browser, to said first network server.

- 5 10. A computer memory encoded with executable instructions representing a computer program for causing a computer system connected to a data network to:

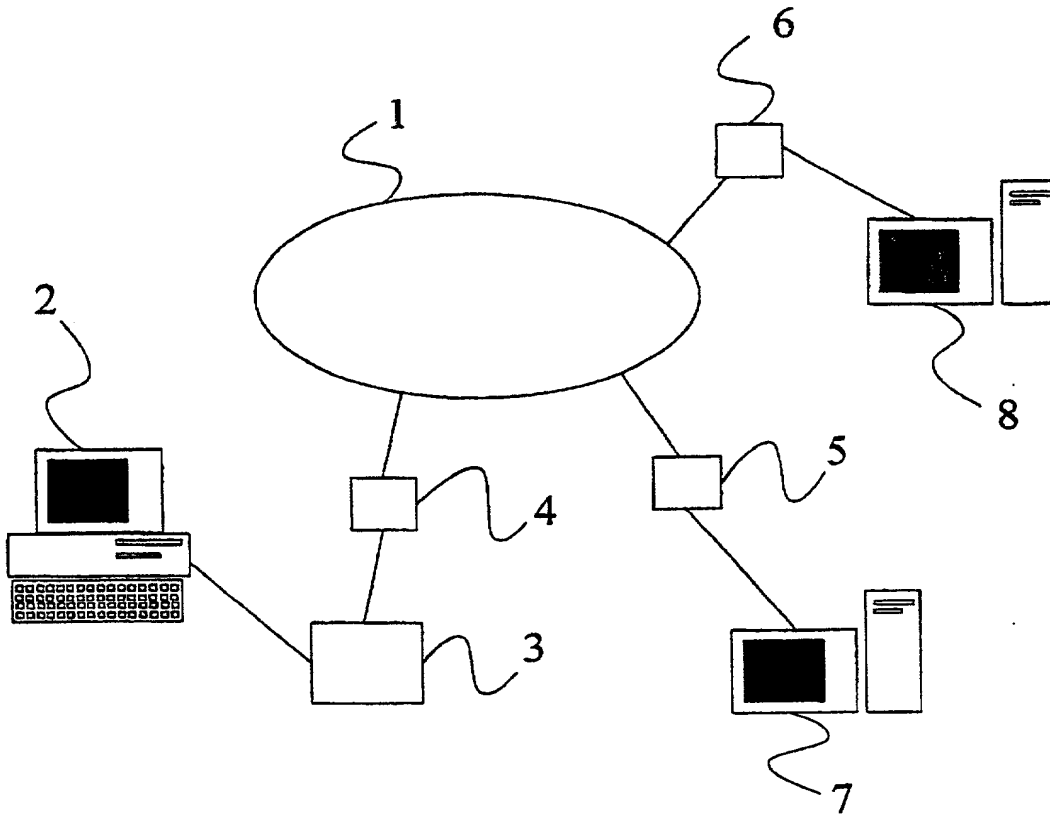
transmit a resource locator retrieval request to a first network server over a data network;

- 10 download an electronic file from the first network server and which is stored at an address identified by said resource locator, the file containing a hyperlink pointing to a resource locator at a second network server;

- 15 in response to selection of the hyperlink, transmit a resource locator retrieval request to said second network server;

- in the event that the second mentioned resource locator is incorrect, to receive from the second network server an error message; and
- 20

transmit the error message to said first network server.

Figure 1

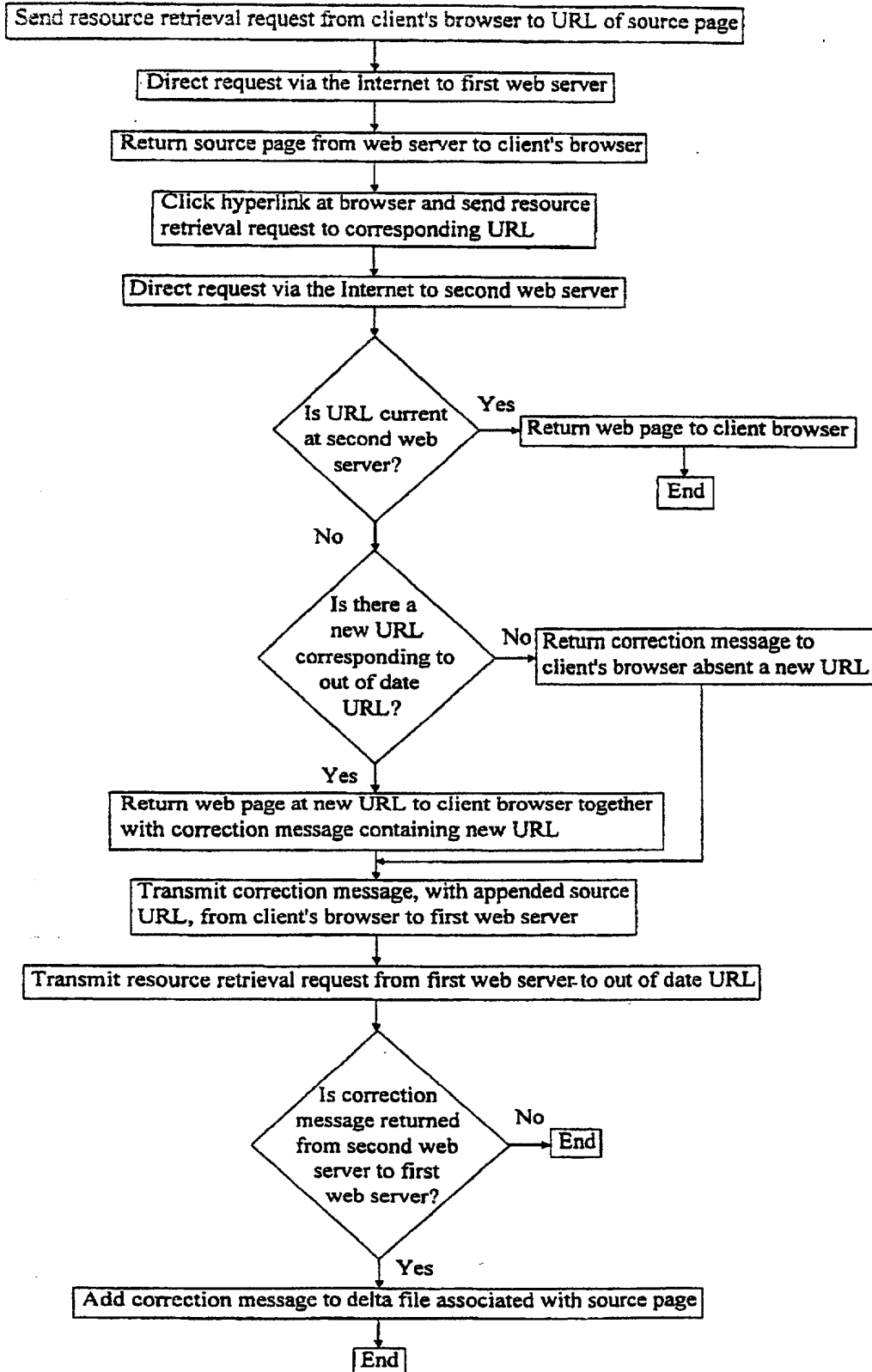


Figure 2

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY
(Includes Reference to Provisional and PCT International Applications)

Attorney's Docket No.

027566-036

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

ADDRESSING IN THE INTERNET

the specification of which (check only one item below):

☐ is attached hereto.

☐ was filed as United States application

Number _____

on _____

and was amended

on _____ (if applicable).

☒ was filed as PCT international application

Number PCT/FI00/00074

on 2 February 2000

and was amended

on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 (a)-(e) of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. §119:

COUNTRY (if PCT, indicate "PCT")	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 U.S.C. §119
FINLAND	990192	2 February 1999	<u>X</u> Yes _ No
			_ Yes _ No
			_ Yes _ No
			_ Yes _ No
			_ Yes _ No

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY (CONT'D)
(Includes Reference to Provisional and PCT International Applications)

Attorney's Docket No.

027566-036

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

(Application Number)

(Filing Date)

(Application Number)

(Filing Date)

I hereby claim the benefit under Title 35, United States Code, §120 of any United States applications(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose to the Office all information known to me to be material to the patentability as defined in Title 37, Code of Federal Regulations §1.56, which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. §120:

U.S. APPLICATIONS			STATUS (check one)		
U.S. APPLICATION NUMBER	U.S. FILING DATE		PATENTED	PENDING	ABANDONED
PCT APPLICATIONS DESIGNATING THE U.S.					
PCT APPLICATION NO.	PCT FILING DATE	U.S. APPLICATION NUMBERS ASSIGNED (if any)			

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY (CONT'D)
(Includes Reference to Provisional and PCT International Applications)

Attorney's Docket No.

027566-036

I hereby appoint the following attorneys and agent(s) to prosecute said application and to transact all business in the Patent and Trademark Office connected therewith and to file, prosecute and to transact all business in connection with international applications directed to said invention:

William L. Mathis	17,337	Eric H. Weisblatt	30,505	Bruce T. Wieder	33,815
Robert S. Swecker	19,885	James W. Peterson	26,057	Todd R. Walters	34,040
Platon N. Mandros	22,124	Teresa Stanek Rea	30,427	Ronni S. Jilhons	31,979
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Norman H. Stepno	22,716	William C. Rowland	30,888	Allen R. Baum	36,086
Ronald L. Grudziecki	24,970	T. Gene Dillahunt	25,423	Brian P. O'Shaughnessy	32,747
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Alan E. Kopecki	25,813	B. Jefferson Boggs, Jr.	32,344	Fred W. Hathaway	32,236
Regis E. Slutter	26,999	William H. Benz	25,952	Wendi L. Weinstein	34,456
Samuel C. Miller, III	27,360	Peter K. Skiff	31,917	Mary Ann Dillahunt	34,576
Robert G. Mukai	28,531	Richard J. McGrath	29,195		
George A. Hovanec, Jr.	28,223	Matthew L. Schneider	32,814		
James A. LaBarre	28,632	Michael G. Savage	32,596		
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21839

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21839

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FULL NAME OF SOLE OR FIRST INVENTOR Kent LAIHO		SIGNATURE <i>AS del</i>		DATE 2001-11-14
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